

AMENDMENT UNDER 37 C.F.R. § 1.111
U. S. Application No. 09/758,126

REMARKS

Claims 1-32 are all the claims pending in the application. By this Amendment, claims 33-38 are added.

As a preliminary matter, the Examiner has acknowledged Applicants' claim for foreign priority and receipt of the certified copy of the priority documents.

The Examiner has objected to the specification under 37 C.F.R. § 1.71 because the Examiner states that the process and structure of displaying a fluorescence image throughout the specification lacks any additional explanation and understanding as to a proper interpretation of the claims. Applicants submit that the structure of displaying a fluorescence image throughout the specification is disclosed in full, clear, concise, and exact terms as to enable any person skilled in the art to make and use the same.

Specifically, the Examiner raises a question regarding whether the first and second fluorescence and reference reflected images are combined, subtracted, correlated, superimposed, etc., to arrive at the tissue image. Also, the Examiner states that the structure and the process to arrive at the tissue image with respect to all the disclosed images should be clarified. Applicants submit that the Specification discloses how the tissue image is formed: "the value of the narrow-band fluorescence image, which value represents a pixel in the narrow-band fluorescence image, is divided by the value of the broad-band fluorescence image, which value represents the corresponding pixel in the broad-band fluorescence image," and "the value of the IR reflected reference light image, is transformed into a luminance signal component" (page 71, line19 - page 73, line 1). Applicants submit that the disclosure satisfies 37 C.F.R. § 1.71 with regard to the supposed ambiguities raised by the Examiner.

AMENDMENT UNDER 37 C.F.R. § 1.111
U. S. Application No. 09/758,126

The Examiner also states that it is confusing and unclear as to how the terms "accurate" and "inaccurate" in page 25 are being used to convey the condition of the tissue. Applicants submit that the terms are clearly used to allow one skilled in the art to make and use the invention.

As disclosed in the Specification, "[t]he fluorescence yield . . . is an index utilized for discriminating normal tissues and diseased tissues of a living body from each other." In the invention, "reference light is irradiated to the living body tissues," and "it often occurs that the reference light undergoes specular reflection (i.e., regular reflection) . . . , and the reflected light (i.e., the regularly reflected light) . . . is directly detected. The area on the living body tissues, from which the regularly reflected light has occurred, is detected as a luminous point having a markedly high luminance, which luminous point does not represent the intensity of the excitation light received by the living body tissues. Therefore, an image representing a correct fluorescence yield cannot be obtained from the area described above." (page 5, lines 10-22).

The specification further discloses that a specified value may be determined, in one embodiment, "in accordance with the intensity of the reflected reference light . . . in the reflected reference light image." (lines 20-24). Thus, at the "abnormal light affected area, which has been affected by light having an intensity equal to at least the specified value and at which the correspondence to the tissue condition of the living body tissues is inaccurate." (page 25, lines 8-11). In other words, the abnormal light affected area does not accurately correspond to the tissue condition of the living body tissues because the correct fluorescence yield cannot be obtained due to the markedly high luminance arising from the specular reflection. In contrast,

AMENDMENT UNDER 37 C.F.R. § 1.111
U. S. Application No. 09/758,126

“the normal light detection area” is where the “correspondence to the tissue condition of the living body tissues is accurate.” (page 25, lines 12-13).

As for the Examiner’s comments regarding “high reliability,” the specification is clear with regard to how accurate and inaccurate correspondences to the tissue condition of the living body tissues allow the tissue condition of the living body tissues to be seen with high reliability. The specification discloses, in an embodiment, the “abnormal light affected area . . . at which the correspondence to the tissue condition of the living body tissues is inaccurate, and the normal light detection area, at which the correspondence to the tissue condition of the living body tissues is accurate, are capable of being easily discriminated from each other” through an embodiment of the method and apparatus of the invention. “[a]s a result, the tissue condition of the living body tissue is capable of being seen with high reliability.” (page 25, lines 8-18). As for the how the discrimination is carried out, the specification clearly shows how it is carried out. (page 25, line 19 – page 26, line 7).

Further, the Specification consistently discloses the regularly reflected light and the reference reflected light. The regularly reflected light occurs in certain situations when the reference light is irradiated. (page 5, lines 8-14). The presence of the regularly reflected light is indicated by the intensity of the reflected reference light. (page 25, lines 20-24). Applicants submit that such recitation is not inconsistent.

For the reasons above, the specification is clear as to what is being discussed and that the language of the specification fully discloses the invention.

AMENDMENT UNDER 37 C.F.R. § 1.111
U. S. Application No. 09/758,126

Claims 1-32 are pending in the application wherein claims 16-32 are withdrawn from consideration. Claims 1-15 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

In the test of enablement, “[a]ny analysis of whether a particular claim is supported by the disclosure in an application requires a determination of whether that disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention.” M.P.E.P. § 2164.01 In the Office Action, the Examiner states that the claims contain subject matter that was not described in the specification sufficiently. Specifically, the Examiner states that it is unclear as to how the tissue condition image is related to the first fluorescent image and at least one of a second fluorescent image and a reflected fluorescent image. Although the claims do not specifically recite the steps involved in forming a tissue condition image, the specification provides a detailed description of how the tissue condition image is formed, as noted above, to satisfy the requirements of 35 U.S.C. § 112, first paragraph. (pages 1, 48, 71-73). Accordingly, the claims are adequately supported for the reasons explained above. The claims need not recite all features of the exemplary embodiment to comply with 35 U.S.C. § 112, first paragraph. Any new rejections over prior art must be made on a non-final basis to the extent that the Examiner contends that analyses of a tissue image is inherent, and Applicants submit that the claims go beyond recitation of such analysis and describe types of reflected light and fluorescence in different wavelength ranges (e.g., claim 1).

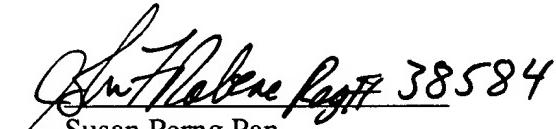
Claims 33-34 are added to describe features of the invention more particularly.

AMENDMENT UNDER 37 C.F.R. § 1.111
U. S. Application No. 09/758,126

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Susan Perng Pan 38584
Susan Perng Pan
Registration No. 41,239

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: December 22, 2003